REMARKS

This is in response to the Office Action dated May 6, 2010. Claims 1-23 are pending and stand rejected in the outstanding Office Action. Claims 1, 4-5 and 15 have been amended.

The Examiner is respectfully requested to consider the Information Disclosure Statement filed August 17, 2010.

Applicant thanks the Examiner for providing Applicant's representative an interview on August 4, 2010.

The rejection of independent claims 1, 4-5 and 15 as allegedly being unpatentable under 35 U.S.C. § 103(a) over Yamaguchi et al. (US 6,266,109) in view of Yamaguchi (US 6,738,054), is respectfully traversed. In order to establish a prima facie case of obviousness, all of the claim limitations must be taught or suggested by the prior art.

Independent claim 1 (similarly for claims 4-5 and 15) recites "voltages differing in voltage values are applied to electrodes across said pair of substrates, so that a first color corresponding to a first voltage has a first gradation and a second color different from said first color corresponding to a second voltage different from said first voltage has said first gradation, to correct for wavelength dispersion of said optical anisotropy of the medium". Support for the amendment can be found, for example, on p. 22, line 8 to p. 26, line 7, and in particular on p. 23, lines 3-9 of the instant specification. None of the cited prior art references teaches or suggests this feature.

Even though Yamaguchi '109 teaches liquid crystal material being enclosed between two substrates, with the optical anisotropy of the liquid crystal material being changed by application of voltage across the pair of substrates, Yamaguchi '109 is completely silent as to the values of the voltage being applied, let alone disclosing values of the applied voltage such that the

displayed colors have identical gradation.

Yamaguchi '109 is not concerned with varying or affecting the gradation of the color image. Yamaguchi '109 is only concerned about using the liquid crystal element as an optical shutter, e.g., as an element for allowing or not the transmission of a color light, or, if used in combination with an image display unit, using it as a color display unit e.g., displaying a green, red, blue or white image.

As disclosed in the instant specification, the optical anisotropy of a medium between the two substrates varies depending on the wavelength, and no achromatic color can be reproduced. This is why, in the invention of claims 1, 4-5 and 15, the voltage is corrected optimally for each gradation and for each of the RGB colors (see p. 22, line 10 to p. 23, line 9 of the instant specification). Yamaguchi '109 does not address this problem, and does not teach or suggest "voltages differing in voltage values are applied to electrodes across said pair of substrates...to correct for wavelength dispersion of said optical anisotropy of the medium". Even though, inherently, different voltages are applied on the switching elements in Yamaguchi '109, there is no teaching or suggestion that these different voltages produce identical gradation for the color images. In fact, unless special care is taken (taught in the instant specification), the color image displays have different gradation.

Yamaguchi '054 discloses a method for converting supplied image data of higher gradation resolution than that of the display so that the image can be displayed without any artifacts. More specifically, in Yamaguchi '054, a display apparatus 10 comprising an LC panel 12 displays images provided by medical diagnostic apparatus R (Fig. 1, col. 3, lines 41-57). The medical diagnostic apparatus (e.g., MRI diagnostic apparatus, X-ray diagnostic apparatus, or CR diagnostic apparatus) supplies image data having a 10-bit gradation resolution, whereas the

display apparatus 10 displays images at an 8-bit gradation resolution, col. 3, lines 58-63). The 10-bit image data supplied from the diagnostic apparatus R is sent to the data processing unit 16 via the I/F 22. The data processing unit 16 is a site where frame control is performed on the supplied 10-bit image data in order to produce 8-bit image data suitable for image display by the display apparatus 10, which is then supplied to the driver IS of the LC panel 12 (sol. 4, lines 39-47).

In the data processing 16, the 10-bit image data is converted to 8-bit image data for frame control display. More specifically, the generated frames of image data are successively displayed so that the display of a lower-bit image provides a gradation representation which is equivalent to the high bit number, thereby enabling the display of an image which is very bright and yet does not have any artifacts (col. 4, line 53 to col. 5, line 2).

In Yamaguchi '054, frame rate control is performed on an input image so that the image is displayed at a display screen with brightness and no artifacts. However, this comprises splitting a frame into a plurality of frames of lower bit resolution. Yamaguchi '054 is completely silent as to applying different voltage values to the liquid crystal panel, so that the different colors have identical gradation. Yamaguchi '054 does not mention applying voltages to the liquid crystal panel and how these different voltages affect the optical anisotropy of the liquid crystal material.

Yamaguchi '054 is concerned with completely different problem than that of the invention of claim 1. The gradation referred to by Yamaguchi '054 relates to the brightness resolution, whereas the claimed gradation relates to the hue of each color. Whereas the method of Yamaguchi '054 converts a high resolution image to a lower resolution image having the same brightness (by dividing a frame into multiple frames), the invention of claim 1 applies

different voltage values to the liquid crystal panel so that the optical anisotropy of the medium produces colors having identical gradations. Hence, Yamaguchi '054 does not teach or suggest "different voltages being applied to the display elements so as to display the colors required to produce a color image display with an identical gradation", a limitation that was admitted by the Examiner as missing from Yamaguchi '109.

For the above reasons, claims 1, 4-5 and 15 are allowable.

It is respectfully requested that the rejection of claims 2-3, 6-14 and 16-23 each being dependent from claim 1, 4, 5, or 15, also be withdrawn.

In view of the foregoing and other considerations, all claims are deemed in condition for allowance. A formal indication of allowability is earnestly solicited.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

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